

POWER POLITICS

Steve Martin

A current important issue in environmental politics is nuclear power; and we in Scotland are as involved as any community in Britain. Scotland has three commercial electricity generating nuclear power stations run by the South of Scotland Electricity Board (SSEB), two at Hunterston in Ayrshire and one at Torness in East Lothian; in addition the UK Atomic Energy Authority (UKAEA) also run the Dounreay fast reactor research establishment in Caithness, and British Nuclear Fuels plc (BNFL) operate the Chapelcross plutonium production reactors near Annan in the south-west. In the past parts of Scotland have been earmarked as nuclear waste disposal sites, proposals which appear to be gaining currency again, and Orkney and Deeside have been suggested as possible uranium mining areas.

This article will discuss the nuclear power debate in Scotland with particular reference to the waste dumping controversy, the Torness nuclear power station campaign and recent proposals for a new fast reactor reprocessing plant at Dounreay. These issues have all generated public resistance, and have contributed to the widely held opposition to nuclear developments in Scotland.

INTRODUCTION

In the nuclear debate there is no issue more likely to anger and activate people than nuclear waste. Local communities perceive proposals for a nuclear 'dump' – or indeed even vague and unsubstantiated rumours of one – as a violation of their environment; they imagine poisoned water, children dying of cancer, and a wholesale destruction of their life-style. Their first impulse is to say "No: we don't want your radioactive refuse dumped in our backyard."

Once the initial emotions have subsided the threat of nuclear dumping serves to make people think. Ironically, the spokespeople from the nuclear industry who come to reassure the locals usually make matters worse. They claim that it is perfectly safe, and that nothing can go wrong. For many local people, this is the first time they have had to consider the nuclear industry. They gradually realise that nuclear dumping is but the final phase in a long process. They begin to question the whole process; they research and learn; they contact bodies for information. They become opposed to the whole

nuclear process, from uranium mining, through fuel production and generation, to reprocessing and waste disposal. They also make contacts with other communities facing the same threat. It is no longer "not in my backyard", it has become "nowhere at all".

And what is it these people learn which makes them so against the nuclear industry? It is not so much what they learn as how they learn it. Official spokespeople are seen as trying to hide information. Circuitous routes have to be taken to achieve an overview. Information from the industry often conflicts with that from other agencies, whether they be anti-nuclear groups or independent bodies. Opinion polls show that the public are likely to believe pressure groups before they believe government officials or nuclear industry spokespeople.⁽¹⁾ Therefore, information pieced together from various sources becomes more 'real' than that spoon-fed from government officials.

So what are the issues which make people so opposed to the nuclear power industry? In Scotland we have more than our share of the nuclear industry. The Hunterston nuclear power stations supplied 45% of Scottish electricity needs in 1986/7,⁽²⁾ and Torness could increase this proportion to over 60%, making Scotland one of the most nuclear-dependent countries in the world. On top of this Scotland also plays host to the Dounreay fast reactor research establishment and the Chapelcross plutonium production reactors, and has been threatened in the past with uranium mining and nuclear waste disposal. And the nuclear dumping threat is about to rear its ugly head again.

TORNESS – THE BEGINNING OF NUCLEAR POLITICS

Nuclear politics began in Scotland in 1974 with a public inquiry into the SSEB's plans to build a nuclear power station at Torness Point near Dunbar in East Lothian. The inquiry lasted nine days in June and July of 1974. The then East Lothian and Berwick County Councils objected on amenity grounds; local farmers, anglers and residents gave evidence against the plant; and Friends of the Earth and the Edinburgh branch of the Conservation Society led a comprehensive case on safety and energy policy. Torness was the first public inquiry at which any comprehensive case was delivered against an application to build a nuclear power station; since then there have been inquiries into nuclear dumping, the Sizewell B nuclear power station, the Windscale Thermal Oxide Reprocessing Plant (THORP), and the Dounreay European Demonstration Reprocessing Plant (EDRP). All of these inquiries lasted much longer than Torness – EDRP and THORP lasted 95 and 100 days respectively, and Sizewell lasted over 2 years.

At the inquiry the SSEB said they needed Torness to fulfil a future electricity demand, and it would be good value for money. Permission was

applied for to build up to eight reactors of any of four types. In his report of 12 November 1974 the Reporter, Mr A G Bell, recommended permission be granted.⁽³⁾ The go ahead was given in February 1975, by William Ross (the then Secretary of State for Scotland), to build a Steam Generating Heavy Water Reactor (SGHWR), which was the reactor design then favoured by the Government.⁽⁴⁾

According to the Scottish Economic Planning Department, if the SSEB wanted to build a different type of reactor it would be up to the Scottish Secretary to decide "what additional processes, if any should be put in hand to assist him to decide"⁽⁵⁾ whether consent should be granted. In 1978 the SSEB decided to build an Advanced Gas-cooled Reactor (AGR) at Torness because the SGHWR had fallen out of favour. Bruce Millan, the then Scottish Secretary gave the go ahead on 25 August 1978, without recourse to a further public inquiry.⁽⁶⁾

Wide-scale opposition to the development grew. Thousands of people gathered at demonstrations at the site in 1978 and 1979, and a Systems Three Scotland opinion poll published in 1978 showed 42% of those questioned were against the plant.⁽⁷⁾ A poll by the same company published in May 1987 showed 53% would like the project to be abandoned.⁽⁸⁾ Over nine years, despite an enormous propaganda effort by the SSEB and the near completion of the plant, more people are against Torness than when the go ahead was given.

The case against Torness is simple: there is no need for further electricity generating capacity in Scotland. At the 1974 inquiry the SSEB based their case on a 6% per annum compound growth in electricity demand until the end of the century; they expected demand to double by 1985.⁽⁹⁾ Demand in 1986/7 was 21,032 million units compared with 19,220 million units in 1974 – an increase of only 9.4% over 12 years.⁽¹⁰⁾ On top of which, the newest non-nuclear power station on the grid in Scotland, Inverkip oil-fired plant, "was placed on a care and maintenance regime from 1 April 1987"⁽¹¹⁾: that is 2,000MW of plant in 'mothballs' compares with only 1,400MW which Torness represents. The SSEB's forecast was therefore wildly inaccurate, optimistic and deceptive.

Another way of looking at this argument is to consider the total generating capacity available on the grid. On 13 January 1987 there was a 'simultaneous maximum demand' in the SSEB area of 5,111MW; at the time the power stations were able to send out about 7,500 MW, 47% more capacity than required on the coldest day.⁽¹²⁾ Furthermore, since the time of the Torness inquiry the number of thermal power stations on the grid in Scotland has been reduced from 13 to 7, but the installed capacity has increased from about 6,000MW to 7,700MW, thereby concentrating power production in a smaller number of larger stations with the consequent requirement for a large overcapacity to cope with plant which is closed for

repair etc.⁽¹³⁾

An important consequence of concentrating electricity production in few, large, nuclear stations is the effect on employment. The nature of nuclear power stations means that they must be run continually as 'base load' supply. There are two reasons for this: first, the much larger capital versus fuel cost of a nuclear station requires constant use to recoup investment; and second, safety and efficiency may be compromised if the station is turned on and off to suit demand. Therefore, nuclear stations displace coal and oil stations from their previous role as base load capacity – with Torness and the two Hunterston stations operating to full capacity almost two thirds of the winter peak demand can be met. The employment effect of nuclear generation is twofold: it is a highly capital intensive industry clearly shown by the 9.5% decrease in the number of SSEB employees over the last 10 years (from 13,632 in 1978 to 12,339 in 1987) compared with the 320% increase in fixed assets per employee over the same period (from £49,039 to £207,744)⁽¹⁴⁾; and the knock-on effect on the coal and supply industries means that workers will be laid off as coal-fired stations and their associated pits have to close – bringing on Torness could mean up to 5,000 redundancies in the Lothians with the closure of Cockenzie and the Monktonhall and Bilston Glen pits.⁽¹⁵⁾

Torness is planned to have a 30 year operating life, during which time it will generate electricity by 'burning' uranium fuel. Periodically spent fuel rods will be removed from the reactor and 2 or 3 'flasks', each containing 20 spent fuel elements, will be sent to Sellafield by rail "not more than one train in any one week" for reprocessing. "The most probable route would be from Torness via Edinburgh-Carstairs-Carlisle to Sellafield, but other routes are available."⁽¹⁶⁾ There is great concern among local authorities and the public about transport of nuclear materials through their communities, but the regulations covering such transports are Government policy and, as such, are not open for consideration at public inquiries.

At the end of that time the station will have to be decommissioned. No realistic costs have ever been proposed for decommissioning; indeed the procedures and method have not yet been worked out, after 30 years of nuclear power generation in the UK. Estimates for costs vary, but could be as high as the construction cost of the station.⁽¹⁷⁾

GOVERNMENT NUCLEAR WASTE POLICY CHANGES

Government nuclear waste policy has been subjected to severe criticism, both from environmental groups and from government advisory bodies. The policy reflects political pressures rather than technical, scientific developments. When the nuclear industry began in Britain in the 1950s no thought was apparently given to what would be done with the long-term waste products. Low level solid wastes have been disposed of on

site at Sellafield and Dounreay, and a national dump exists at Drigg in Cumbria. More bulky and longer-lived radioactive materials used to be dumped in the north Atlantic Ocean, 500 miles south west of Lands End, but this route was abandoned in 1983 because of industrial action by the National Union of Seamen and international pressure.

Investigations began in the late 1970s to find a site for a deep depository for high level nuclear waste. This material is the concentrated liquid generated by reprocessing spent fuel. It is currently stored in steel-lined tanks at Sellafield. Almost 1,500 cubic metres of this material is awaiting disposal, and it remains radioactive for thousands of years.⁽¹⁸⁾ It is intended that this liquid will be vitrified – turned into glass – but a commercial scale plant has not yet been built.

In February 1980 a public inquiry was held into an application by the UKAEA to carry out test drilling on Mullwharchar hill, in the Galloway Forest Park in south west Scotland, to discover if the rock was suitable for high level waste disposal. A further inquiry, looking at the Cheviots, took place later that year. Following great public opposition to the plans, and a report from their Radioactive Waste Management Advisory Committee (RWMAC), the Government abandoned the high level waste programme in December 1981, and decided that the waste should be stored for 50 years before disposal.⁽¹⁹⁾ However, Dr Stanley Bowie, a member of RWMAC and one of the country's leading nuclear geologists, resigned the following year because he believed the Government had taken the Committee's advice out of context: they had given in to political pressure.⁽²⁰⁾ A new disposal policy was announced in 1983: low and intermediate level wastes were to be disposed of on land. A deep anhydrite mine under Billingham in Cleveland, was proposed for intermediate level waste, and Elstow in Bedfordshire was proposed for low level waste.⁽²¹⁾ Opposition groups were formed in the threatened areas. Billingham was abandoned in January 1985; one reason given was that ICI (the mine's owners) had refused access to the survey team because of huge pressure from the local community.⁽²²⁾

Three further sites joined Elstow on the short list for a low level waste dump in February 1986 after a year of procrastination by the Government.⁽²³⁾ To avoid another embarrassing public inquiry, Special Development Orders were granted in Parliament to permit survey engineers access to the sites.⁽²⁴⁾ Local opposition grew, the sites were blockaded, injunctions were served, objectors were arrested, mistrust developed. On 1 May 1987 the Government abandoned the sites in response to a letter from John Baker, the head of NIREX (the company responsible for nuclear waste management). Mr Baker suggested "a major change of approach." The low level sites should be abandoned and efforts should be concentrated "on the development of options for the deep disposal of intermediate level wastes with the additional intention to piggy-back low level wastes in the same facility."⁽²⁵⁾ In response to the

announcement David Clark MP, Labour's environment spokesperson, described the decision as "a squalid attempt to save themselves from electoral embarrassment" because the areas included constituencies of three Government ministers and unpublished internal opinion polls showed Conservative support waning in the constituencies, and a general election was due.⁽²⁶⁾

Which brings the nuclear waste controversy back to Scotland. The merging of the intermediate and low level repository investigations gave cause for alarm to Scottish observers. During late 1987 rumours began to circulate among Scottish island communities. The islands of Jura, Raasay, Orkney and Shetland were the first to be suspected, although many more will follow. There is also suspicion that Mullwharchar may again become a possible site, along with an area of moorland in Caithness called Altnabreac which has already been surveyed as part of the 1970s high level programme. Anti-dumping groups have been formed in many parts of Scotland, and a national umbrella organisation – Scotland Against Nuclear Dumping (SAND) – was formed in June 1987. SAND will help to co-ordinate opposition to local dumping plans, will circulate information between groups, and will liaise with anti-dumping groups in England and Wales.⁽²⁷⁾

FAST REACTOR DEVELOPMENT

During this period of nuclear waste policy changes, another nuclear initiative was being developed. In January 1984 Peter Walker, the then Secretary of State for Energy, signed a 'Memorandum of Understanding' with Energy Department representatives of Belgium, France, Italy and West Germany. This agreement marked Britain's entry into the European collaboration on fast reactor development.⁽²⁸⁾

The fast reactor is the 'philosopher's stone' of nuclear power enthusiasts; it is a reactor system which is theoretically capable of 'breeding' its own fuel. The core of the fast reactor contains a fuel mixture of plutonium and uranium oxides, and is surrounded by a 'blanket' of 'fertile' uranium which is not itself capable of sustaining a chain reaction but can 'capture' neutrons which escape from the core reaction; this converts the uranium into plutonium which can then be used as a fuel. An essential component of this reactor system is reprocessing – the unburnt plutonium and uranium from the core, and the bred plutonium from the blanket, must be chemically separated and recycled to meet a return on the vast capital investment required for the system. The declared advantage of fast reactors over 'conventional' reactors is their ability to extract 60 times as much energy from a given amount of uranium by this breeding and reprocessing system.⁽²⁹⁾

To date more than £2,500 million has been spent on fast reactor research and development in this country, much of the work being carried

out at the UKAEA's Dounreay establishment near Thurso in Caithness.⁽³⁰⁾ The other European countries have also spent large sums on fast reactor research and development. The collaboration grew out of their objective to continue the fast reactor development but reduce the individual countries' financial commitment. Hence, the proposed programme is to include three full sized commercial demonstration reactors, a fuel fabrication plant and a reprocessing plant. However, because of the collaborative nature of the programme each of these plants could be in a different country.

In May 1985 the Government announced their support for an application for outline planning permission by the UKAEA and BNFL to construct the reprocessing plant component of the collaboration – the European Demonstration Reprocessing Plant (EDRP).⁽³¹⁾ This plant was to take spent fuel from the three European collaborative reactors, reprocess it to extract the plutonium and uranium, and send those materials to the fuel fabrication plant. No decision has yet been taken as to where the reactors will be built, so until there is fuel to be reprocessed from them the Dounreay EDRP is proposed to reprocess spent fuel from the existing French Superphenix fast reactor, and the German Kalkar plant which is not yet operating. Highly radioactive plutonium spent fuel will therefore have to travel by sea and rail to Dounreay from up to 1,000 miles away; and pure plutonium oxide will be flown back to a fabrication plant whose site has not yet been decided.

THE EDRP PUBLIC INQUIRY

A public inquiry into the EDRP application began at Thurso on 7 April, and ended on 19 November 1986. The terms of reference of the inquiry were seriously questioned before the inquiry opened, and many major objectors decided not to participate because of the restrictions imposed on what evidence could and could not be heard.⁽³²⁾ The form of inquiry – a public local planning inquiry under the Town and Country Planning (Scotland) Act 1972 – meant that matters of Government policy could not be examined;⁽³³⁾ objectors had demanded a Planning Inquiry Commission which could have looked at all aspects of the application and which could have questioned government policy. Also, the Scottish Secretary refused to allow objectors to be financed from the public purse; the UKAEA/BNFL resources far outstripped those of the objectors, and they had access to public funding from the tax payer.

The major issues which arose during the inquiry were: transport plans, plant safety and management, nuclear waste management, radioactive discharges, health effects, economic effects and the threat of proliferation of nuclear weapons materials.

Transportation

The objectors argued Dounreay was the worst possible choice for a European reprocessing plant because of the distances involved in transportation – the greater the distances involved the greater the risk of accident or terrorist intervention. At the same time as dismissing such accusations, the Applicants would not openly discuss security arrangements for the transports, and the Reporter refused to accommodate detailed discussion of the links between nuclear weapons programmes and the fast reactor programme although the Applicants were allowed to say that fast reactor plutonium is not suitable for nuclear warheads.

One aspect of transport which angered objectors was the Applicants refusal to specify which port they intended to use to bring the spent fuel into the country, and from which the spent fuel will be taken by rail to Dounreay. At a pre-inquiry meeting in December 1985 the Applicants agreed to supply a short list of possible ports.⁽³⁴⁾ At the time of the inquiry this list contained four ports, three on the Cromarty Firth and Scrabster near Dounreay. During the inquiry it transpired that they were still considering other ports, and in his Part 1 report on the inquiry the Reporter discounted the Cromarty Firth options because "there is no indication of any support from the (Cromarty Firth) port authority" narrowing down the options to "the use of Scrabster as the port of entry or the use of a link to the national rail network permitting access to a wider range of ports."⁽³⁵⁾ In short, the Applicants are now free to choose any port, from the south coast of England to the north of Scotland, through which to bring in the spent fuel even though they were ordered to produce a short list for consideration at the inquiry and the objectors could therefore only present evidence and cross examine on that basis. It means that, if the proposal goes ahead, spent fuel could now travel up the length of the country.

Plant Safety and Management

Safe operation of the proposed plant, and the management's ability to ensure such, was also a subject of criticism. The Applicants claimed the record of BNFL at Sellafield was irrelevant to the application, although there have been over 300 incidents there over the past 30 years, and this application was jointly lodged by the UKAEA and BNFL.⁽³⁶⁾ BNFL were found guilty and fined £10,000 for four breaches of nuclear safety following discharge of a radioactive slick into the Irish Sea in 1983.⁽³⁷⁾ Also, an investigation by the NII, following a spate of accidents in early 1986, gave BNFL 12 months to overhaul plant safety or face closure: a month after their report was published another incident, similar to the one which prompted the investigation, occurred – the plant is still operating.⁽³⁸⁾

The UKAEA's record at Dounreay is not as unblemished as they claim. In the run up to the EFRP inquiry the UKAEA were forced to release previously restricted minutes of the health and safety sub-committee which revealed a record worse than Sellafield's on a fuel

throughput basis – 194 incidents occurred in 1984 alone.⁽³⁹⁾ Radioactive particles have been discovered on a beach near the plant, and contamination has been detected on buses used by workers which are also used by school children.

Nuclear Waste Management

Throughout the inquiry the Applicants, and Government policy witnesses, asserted that nuclear waste will be disposed of as according to government policy; for low level waste this meant in the shallow repositories proposed for the southern English sites. But, these sites have now been abandoned, so again the objectors found themselves arguing in an area which was subsequently changed. It was accepted by the Applicants that high level nuclear waste resulting from reprocessing overseas spent fuel will be stored at Dounreay pending construction of sites to take it. The logistical difficulties of transporting large volumes of low level wastes back to the country of origin, as is government policy, means that “it may be sensible to substitute an equivalent quantity, in radiological terms, of higher level waste” according to Mr Morphet of the Department of Energy – Britain will have to dispose of large volumes of low level European radioactive wastes as well as store high level wastes pending their return.⁽⁴⁰⁾

Radioactive Discharges

Although the final design of EDRP is not yet certain it is clear it will incorporate the deliberate discharge, of low level liquid and gaseous wastes. These discharges will be “as low as reasonably achievable”; this does not mean that they will be safe. Considerable concern was expressed by the objectors about levels of discharge, and their effects on fishing, farming and tourist industries. Local produce could be ‘tainted’ in the public mind by the mere threat of discharges.⁽⁴¹⁾

The annual discharges will be about the same as from the French Cap de la Hague reprocessing plant which is a large commercial plant with a much greater throughput. It is clearly unsatisfactory that a demonstration plant not expected to be operational for over 10 years will discharge almost as much as an existing French commercial scale plant.⁽⁴²⁾ There are no proposals for the capture of krypton-85 gas, despite a greater amount of its discharge from EDRP than from the existing plant at Dounreay and Mr Justice Parker’s (the Inspector at the 1977 Windscale Inquiry) comments that he was “satisfied” that krypton removal plant should be incorporated into THORP.⁽⁴³⁾

Health Effects

A special 13 day session was set aside at the inquiry to consider evidence on the health effects of radioactive discharges. The basis of

medical evidence from the Thurso area was a study prepared by Dr Heasman, a medical statistician with the Scottish Health Service, which showed an increased incidence of leukaemia in the 0-24 age group within 12.5km of Dounreay between 1979 and 1984.⁽⁴⁴⁾ When asked his opinion on the possibility of the increased leukaemia incidence occurring by chance, Dr Heasman replied: “It is more likely to have had some other cause.”⁽⁴⁵⁾ This led him to conclude that some causal connection must exist, and Dounreay should not be excluded as the cause – a possibility strengthened by similar evidence which exists around Sellafield and other nuclear establishments.

In the conclusions to his Part 1 Report, Mr Bell turned this evidence on its head and declared: “the cluster identified within 2.5km of Dounreay in 1979/84 could have emerged by chance.”⁽⁴⁶⁾ However, because of the continuing debate over whether or not a link between nuclear plants and leukaemia exist, he accepted that further work, including case studies, needs to be carried out. The unresolved nature of the controversy was highlighted by Andrew Hardie QC, the independent Counsel to the inquiry. He argued that a decision on the application should be postponed until the Committee on the Medical Aspects of Radiation in the Environment (COMARE) had published their major report providing new evidence on the Dounreay leukaemias.⁽⁴⁷⁾

Economic Effects

No study of the socio-economic effects of the EDRP proposal have been made. The Applicants stated that between 600 and 800 jobs will be created during the construction phase, but labour required for operation will be redeployed from the existing workforce. The estimated cost of £200 million, about £250,000 for each temporary job, could be used more productively to create permanent jobs in the local area. For example, the tourist industry has below average costs per now job generated, is largely labour intensive and can expand rapidly.⁽⁴⁸⁾ It is important to study the lost opportunity cost of EDRP in terms of what effect the injection of a similar amount of capital into the tourist industry would have. As EDRP is to be funded from the money markets, with the Government underwriting the borrowing, there is no reason why the Government should not be willing to extend the same facility to some other agency. The alternative of funding other energy projects should also be examined, both in terms of return of capital and employment potential. Scotland, and particularly the far north, is well suited for the development of renewable energy technologies. Such an examination would be in the public interest.

It is also important to note that the usual practice in such projects is to import construction labour. A study for Gwynedd County Council, which covers an area containing two nuclear power stations, showed that unemployment actually rose after construction had finished because there

was no work for those workers who chose to stay in the area.⁽⁴⁹⁾ The Council concluded that major construction schemes help prevent the growth of employment in more stable industries as a result of their impact on local wage levels and labour supply. Short term advantages need to be set against long term disadvantages.

As mentioned above, EDRP is but one component of a European collaborative venture, and until the collaborative reactors are operating it will be reprocessing fuel from the French and German fast reactors. The Applicants stressed the urgency of receiving outline approval for EDRP at this stage to allow them a bargaining counter in negotiations with the French who are also interested in building the plant.⁽⁵⁰⁾

However, Superphenix, their reactor, is currently out of operation because of persistent leaks from its sodium secondary circuit; a problem which the French nuclear industry regard as presenting serious doubts for the future of the fast reactor programme. German involvement in the programme is also in doubt as their Kalkar reactor project is stricken with local political problems. After Chernobyl the Italian commitment to the collaboration wavered significantly when ENEL (their electricity utility) voted to withdraw from Europe's second fast reactor project.⁽⁵¹⁾ Confidential documents leaked from the UKAEA in 1987 indicate that there is little support in this country for the fast reactor, and the countries in the collaboration are unable to agree on how the programme should proceed⁽⁵²⁾ – the whole venture could still fail; at any rate, the urgency implied by the Applicants is now retreating rapidly into the distance.

Nuclear Weapons Proliferation

As described above, the purpose of EDRP is to separate plutonium from spent fuel for future use as fast reactor fuel, but there is no technical reason why it could not find its way into nuclear warheads. In 1978 General Jean Thiry, an adviser to the managing director of the CEA (the French Atomic Energy Authority), wrote:

“France will be able to build atomic weapons of all kinds and within every type of range. At relatively low cost, she will be in a position to produce large quantities of such weapons, with fast breeders providing an abundant supply of the plutonium required.”⁽⁵³⁾

France has refused to sign the Nuclear Non-Proliferation Treaty, although they have said that they will act as though they are a party to it. It is surely inappropriate for France to be bidding for a central role in a nuclear trading system whilst remaining outside the NPT and other multilateral control treaties. Britain should be urging France to sign the NPT, not aiding and abetting their nuclear ambitions.

Past British statements and practices also cast doubt on the uniquely civil role of EDRP. At the Sizewell inquiry every effort was made to convince the public that no plutonium from CEBG reactors had been diverted to military uses.⁽⁵⁴⁾ Three years later Lord Marshall, the CEBG Chairman, admitted plutonium had indeed been moved from civil to military stockpiles.⁽⁵⁵⁾ The CEBG were prepared to deliberately and grossly mislead a public inquiry on a point which was absolutely crucial to the debate. It is well known that BNFL practice “co-processing” at Sellafield – spent fuel from civil and military reactors is reprocessed together. The definition of civil or military material is also confused. One might reasonably expect that military plutonium comes from a military reactor, and civil plutonium from a civil one; but BNFL define the material by final destination not source.⁽⁵⁶⁾ So, if high purity (weapons-grade) plutonium comes from the co-processing it is classified as military material, whereas impure plutonium is called “civil”. BNFL's contention that civil plutonium is not used in warheads can only be justified by this sleight of hand.

There is a great grassroots feeling in Scotland against nuclear weapons, so the proposal to build a reprocessing plant capable of providing material for not only British, but also French nuclear weapons, has been greeted with condemnation. There is nothing in the Applicants' case, or official statements, which gives absolute confidence that plutonium will not find its way into nuclear warheads; in fact there is good reason to suspect that it will.

POLITICAL RESPONSES

At the 1987 General Election the great majority of Scottish voters cast their ballot in favour of Parties against further nuclear expansion, but the elected British Government is fully committed to the expansion of the nuclear industry. The abandonment of English dump sites, the expanding reactor programme announced by the Central Electricity Generating Board, and rumours of nuclear dump sites all suggest that Scotland could be earmarked for further nuclear developments.

Scotland has been threatened by the nuclear industry in its many guises over the past decade, and people have learnt to be suspicious. At the time of the Torness inquiry there was little opposition to nuclear power, but as the campaign has developed a small group of protestors has become the majority. This popular opposition to nuclear power now has the support of political parties, trade unions, and local authorities. The Scottish National Party and the Liberals have been against nuclear power for a long time, and were joined by the Labour Party in 1986 following a successful anti-nuclear motion at their Conference.⁽⁵⁷⁾ At their 1987 Congress the Scottish TUC passed a motion calling for a moratorium on further nuclear stations,⁽⁵⁸⁾ after many years of supporting nuclear power, and the TUC nationally are

currently reviewing the whole question of nuclear power.⁽⁵⁹⁾ Local authorities are now opposing Torness, Dounreay and proposed nuclear dumping; the Nuclear Free Zones Scotland Steering Committee have spent a lot of time researching and discussing these issues, and they have produced a booklet and other material on the EDRP proposal. There is no doubt that any future nuclear plans will be met with a strong and united opposition.

Steve Martin, Scottish Campaign to Resist the Atomic Menace, Edinburgh.

References

1. Donald McLeod, "Poll majority opposes new N-plants", *Scotsman*, 25.1.1987.
2. SSEB, *Report & Accounts 1986/87*, SSEB, Glasgow, 1987, p.15.
3. A G Bell, *Report into the inquiry into an application for consent under Section 2 of the Electric Lighting Act 1909 to the construction of a nuclear power station at Torness, East Lothian*, Edinburgh, 1974, p.67, para.1.
4. SCRAM, *Torness Nuclear power Station - From Folly to Fiasco*, Edinburgh, 1983, p.3.
5. Letter from Scottish Economic Planning Department to SCRAM, 21 September 1977.
6. Margaret Harker 'Millan presses Torness button', in *Evening News*, 25.8.1978.
7. *Attitudes to Torness nuclear power station*, System Three Scotland, 4.12.1978.
8. *Report of a survey on nuclear power*, System Three Scotland, 29.5.1987.
9. *op.cit.*, (3), p.6, para.14-16.
10. SSEB, *Report & Accounts 1974/75*, Glasgow, 1975, p.48, compared with SSEB, *Statistical Supplement & Tariffs 1986/87*, Glasgow, 1987, p.23.
11. SSEB, *Statistical Supplement & Tariffs 1986/87*, Glasgow, 1987, p.25.
12. *ibid.*, p.22 and p.25.

13. *op.cit.*, (10), p.49 compared with p.25.
14. *ibid.*, p.69 compared with p.24.
15. John Home Robertson MP, *Hansard*, 1.2.1982, col.81-84.
16. G W Maycock, *Appeal by SSEB against a refusal to permit the erection of a railhead facility at Skateraw, Dunbar*, Edinburgh, 1985, para.4.34- 4.35.
17. R Bullock, *Decommissioning of the Maine Yankee nuclear power plant, Maine, USA*, Environmental Action Foundation, Washington, 1984, p.66.
18. Environment Committee First Report, Session 1985/86, *Radioactive Waste, vol.1*, HMSO, London, 1986, Table 5, p.xxv.
19. P Hetherington, "Government halts nuclear waste tests", *Guardian*, 17.12.1981.
20. "Scientist revives row over nuclear waste", *Glasgow Herald*, 1.3.1982.
21. David Fairhall, "Two sites on short list for N-waste dumps", *Guardian*, 25.10.1983.
22. Maurice Samuelson, "Billingham rejected as nuclear waste dump", *Financial Times*, 25.1.1985.
23. Kevin Brown, "Tories in angry protests over N-waste sites", *Financial Times*, 26.2.1986.
24. John Carvell, "Nine rebels defy Government over N-waste sites", *Guardian*, 23.5.1986.
25. Letter from John Baker (NIREX) to Nicholas Ridley MP (Environment Secretary), 30.4.1987.
26. Alan Travis and John Ardill, "Ridley dumps N-waste sites", *Guardian*, 2.5.1987.
27. "Scotland unites against nuclear dumping", press release from Scotland Against Nuclear Dumping (SAND), 22.6.1987.
28. "Peter Walker signs a European Agreement for the fast reactor", Department of Energy press release, 10.1.1984.

29. UKAEA, *Annual Report 1986/87: special Dounreay supplement*, London, 1987, p.2.
30. Nuclear Free Zones Scotland, *Dounreay Expansion: the case against*, Glasgow, 1987, p.3.
31. Martin Dowle, "Dounreay picked for Euro waste plant", *Scotsman*, 25.5.1985.
32. David Fairhall, "Dounreay protestors in boycott", *Guardian*, 4.4.1986.
33. Letter from A G Bell to objectors to EDRP application, 9.1.1986, para.2.
34. *Transcript of pre-inquiry meeting held into the EDRP application*, 12.12.1985, p.98E.
35. A G Bell, *Report of Dounreay EDRP public local inquiry, part 1 draft*, Edinburgh, 1987, p.135, para.7.76(17).
36. *op.cit.*, (30), p.9.
37. Raymond Hughes, "BNFL fined £10,000 over Sellafield N-waste leaks", *Financial Times*, 24.11.1985.
38. *op.cit.*, (30), p.10.
39. "Dounreay hit by 194 radiation incidents". *Glasgow Herald*, 3.2.1986.
40. *Transcript of EDRP inquiry*, 1986, day 1, p.25F.
41. *op.cit.*, (30), p.15.
42. *ibid.*
43. Hon. Justice Parker, *Windscale inquiry report, vol.1*, London, 1978, p.49, para.10.52.
44. M A Heasman *et al*, "Childhood leukaemia in northern Scotland", *The Lancet*, 1.2.1986, p.266.
45. *op.cit.* (40), day 69, p.17A.
46. *op.cit.* (35), p.197, para.10.84(10).
47. *op.cit.* (40), day 69, p.3A.

48. *op.cit.* (30), p.21.
49. Gwynedd County Council, *The impact of a power station on Gwynedd*, 1976, para.2.5.8.
50. UKAEA/BNFL, *Supplementary information relating to the outline planning application for a European Demonstration Fast Reactor Fuel Reprocessing Plant at Dounreay, Caithness*, London, May 1985, para.1.2.
51. *op.cit.* (30), p.22.8.
52. Confidential memorandum from J E Sanders (UKAEA fast reactor liaison officer) to Dr J E R Holmes (Director, UKAEA Winfrith), 9.4.1986.
53. *op.cit.* (30), p.24.
54. Rob Edwards, *Nuclear Power, Nuclear Weapons – the deadly connection*, CND Publications, London, 1985, pp.15-20.
55. Rob Edwards, "Official: CEBG plutonium did go to the Military", *New Statesman*, 21.3.1986, p.6.
56. Fred Pearce, "More clues in the plutonium puzzle", *New Scientist*, 19.9.1985, p.19.
57. Peter Riddell, "Labour votes to phase out N-plants", *Financial Times*, 2.10.1986.
58. "Power unions bypass differences", *Guardian*, 23.4.1987.
59. Nuclear Energy Review Body, *Review of Nuclear Energy – progress report*, TUC, 1987.